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In the Abstract:

Kindly delete the current Abstract of the Disclosure and replace it with the new Abstract of the Disclosure submitted herewith on a separate sheet.

Remarks

Claims 1-32 are pending in the application. Claims 30-32 are newly added. Claims 1-29 stand rejected. Favorable reconsideration is respectfully requested.

An amended Fig. 2 has been submitted herewith to correct reference numerals therein. The amendments are supported by the specification at, for example, page 40, line 9 through page 43, line 9. Applicant respectfully requests entry of the proposed amendments.

The drawings were objected to as not showing every feature of the invention recited in the claims. Specifically, the Examiner alleges that communication through a local area network as recited in claim 22 is not shown in the figures.

In response, the Examiner's attention is directed to Figs. 1 and 8, where communication through a local area network is clearly illustrated. Fig. 1, for instance, shows that communication between the main control device (42) and the actuator control device (44, 46, 48, 50) is effected through a LAN (local area network) in the form of a CAN (car area network). Similarly, Fig. 8 shows that data communication between the main control device (300) and the actuator control device (44, 46, 48, 50) is effected through a LAN.

Accordingly, withdrawal of the objection to the drawings is respectfully requested.

The Examiner's objection to the disclosure in item 3 of the above-noted Office Action is noted. The informalities on pages 59, 63 and 64 noted by the Examiner have been corrected by amendments as set forth above. Additionally, a new Abstract of the Disclosure in more idiomatic language has been submitted herewith.

However, notwithstanding the Examiner's objection, Applicant respectfully submits that the summary of the invention is fully compliant with regulations.

37 CFR § 1.51 sets forth the general requisites of an application. With regard to the specification, paragraph (b)(1) recites that: "A complete application filed under § 1.53(b) or § 1.53(d) comprises: A specification as prescribed by 35 U.S.C. 112 ..." The Examiner is referred 35 U.S.C. 112, which makes no mention of any prescribed format for the specification.

The Examiner is further referred to 37 CFR § 1.71, which sets forth other requirements for the specification. Again, there is no mention of a prescribed format for the specification

Finally, 37 CFR § 1.73, which relates specifically to the summary of the invention, only recites that "A brief summary of the invention indicating its nature and substance, which *may* include a statement of the object of the invention, *should* precede the detailed description. Such summary *should, when set forth* be commensurate with the invention as claimed and any object recited *should* be that of the invention as claimed." (Emphasis added.)

Thus, there is no statutory basis for the Examiner's assertion that "[t]he use of claim format in the specification is improper." Moreover, the permissive language of 37 CFR § 1.73 ("may,""should," and "when set forth," not "shall") indicates that the

specification need not even include a summary of the invention, and suggests that the language of the summary should be given wide latitude. In this regard, it is noted that the Examiner contends that the language of the summary is merely "similar" to claim language. Applicant observes that much of the language of any specification could be characterized as "similar" to claim language, since the specification must support the claims.

In view of the foregoing, withdrawal of the objection to the disclosure is respectfully requested.

Claims 1-29 were rejected under 35 USC 112.

Specifically, with regard to claims 1, 2-4, 19, 21 and 22, the Examiner states that it is unclear whether the Applicant is claiming the combination of an electrically controlled braking system and an automobile and wheel, or the subcombination of an electrically controlled braking system and its components. Accordingly, the claims have been amended as set forth above to emphasize that the claims are directed to the subcombination of an electrically controlled braking system.

Claims 8, 9, 15, 17, 18 and 20 have been amended as set forth above to correct the informalities noted therein by the Examiner.

In response to the Examiner's comments regarding claim19, Applicant observes that claims 1 and 19 do not necessarily imply that there is a "difference" between the wheel recited in claim 1 and the wheels recited in claim 19. Claim 1 recites an electrically controlled brake for braking "a wheel of an automotive vehicle"; claim 19 recites that the electrically controlled brake comprises a plurality of brakes for braking "respective wheels of the automotive vehicle." There is nothing inconsistent in these

recitations; the wheel recited in claim 1 could be one of the "respective wheels" or a separate wheel. The term "respective," as used, only means "pertaining to an individual wheel."

In view of the above, withdrawal of the rejection of claims 1-29 under 35 USC 112 is respectfully requested.

Claims 1 and 5 were rejected under 35 USC 102(b) as being anticipated by Frait et al. (U.S. Patent No. 4,721,344).

It is noted that anticipation requires the disclosure, in a prior art reference, of each and every limitation as set forth in the claims. *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985). There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. § 102. *Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001 (Fed. Cir. 1991). In view of the foregoing authority, the cited reference fails to support the asserted rejection.

Claim 1 has been amended as set forth above to emphasize advantageous features of the invention. Among other features of the claimed invention absent from Frait are a first switch and second switch connected in parallel. The first switch can be turned on and off in response to an operation of the ignition switch, while the second switch can be turned on and off in response to an operation of the brake operating member. The claimed structure allows the electrically controlled braking system to be activated by operation of the brake operating member even while the ignition switch is off. Support for the amendments can be found, for example, in the present specification from page 40, line 9 to page 42, line 27, and the paragraph bridging pages 64-65.

Frait is silent as to any such parallel switches, and accordingly, fails to meet the requirements for sustaining a rejection of claim 1 as anticipated.

Original claim 5 has been rewritten in independent form as set forth above. Among other features recited in claim 5, Frait is silent as to a plurality of switches connected in series with each other, that are included in a switching device as claimed. Such switches, according to one embodiment, are shown in Fig. 2. See, for example, switches 96a and 98a. Advantages of such a plurality of switches in series are described in the specification at, for example, the paragraph bridging pages 42-43. The redundancy in switches allows power source switching device 78 to be switched off even if one of the switches fails, and thus, power source switching device 78 can be turned off while the ignition switch 84 is off.

In Frait, by contrast, transistor 94 functions to only allow current to flow in transistor 90, thereby providing a PWM 70 output signal to current amp 92, when transistor 94 receives an enabling signal from power source 86. See Frait at col. 8, lines 48-68.

In view of the foregoing, withdrawal of the rejection of claims 1 and 5 as anticipated by Frait is respectfully requested.

Claims 2 and 19 were rejected under 35 USC 103(a) as being unpatentable over Frait et al. in view of European patent to Maron et al. (having English equivalent U.S. Patent No. 5,957,551).

It is noted that to establish a prima facie case of obviousness under Section 103, all claim limitations of a claimed invention must be taught or suggested by the prior art. *See MPEP, Section 2143.03* and In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA

1974). In view of the foregoing authority, the cited references fail to support the asserted rejection.

Claims 2 and 19 are each dependent upon claim 1, and consequently incorporate its features. Claim 1 has been demonstrated to be allowable over Frait, above. Maron does not independently suggest the features of claim 1, nor remedy the deficiencies of Frait with respect to claim 1. Thus, claims 2 and 19 are allowable over the combination of Frait and Maron for at least the reasons discussed in connection with claim 1.

Accordingly, withdrawal of the rejection of claims 2 and 19 as being unpatentable over Frait et al. in view of Maron et al. is respectfully requested.

Claims 3, 4, 18, 21 and 22 were rejected under 35 USC 103(a) as being unpatentable over Frait et al. in view of Maron et al. Each of these claims depends upon claim 1, and therefore, along lines discussed above, are allowable over the combination of Frait and Maron for at least the reasons discussed in connection with claim 1.

Accordingly, withdrawal of the rejection of claims 3, 4, 18, 21 and 22 as being unpatentable over Frait et al. in view of Maron et al. is respectfully requested.

Claims 6-8, 11-13 and 29 were rejected under 35 USC 103(a) as being unpatentable over Frait et al. in view of Imanaka (U.S. Patent No. 4,651,071).

Claim 6-8, 11, 12 and 29 each depend upon claim 1. Claim 1 is allowable over Frait et al. as demonstrated above. Imanaka does not independently suggest the features of claim 1, nor remedy the deficiencies of Frait. Accordingly, claims 6-8, 11, 12 and 29 are allowable over the combination of Frait and Imanaka for at least the reasons discussed in connection with claim 1.

Accordingly, withdrawal of the rejection of claims 6-8, 11, 12 and 29 as unpatentable over Frait and Imanaka is respectfully requested.

Original claim 13 has been re-drafted in independent form, as set forth above. Among other aspects of the invention as recited in claim 13, the combination of Frait and Imanaka is silent as to an electric power source which supplies electric energy to a brake, and a plurality of electric power sources which are arranged to supply electric energies to a front brake control device independently of each other. The claimed structure makes it possible to control the operation of the front wheel brake as long as one of the electric power sources is normal, even in the event of the occurrence of an excessive output drop or other abnormality in one or more of the electric power sources.

It is noted that the Examiner alleges an equivalence between the "POWER SOURCE" and the "BATTERY BDC" shown in Fig. 1 of Imanaka, and the claimed plurality of power sources. However, as is evident upon a review of Imanaka, these are not power sources which supply electric energy to a brake, nor power sources arranged to independently supply electric energies to a front brake control device. Rather, they are power sources for a circuit which is directed to detecting malfunctioning receivers of brake commands transmitted over dispatch lines in the form of digital signals. See, e.g., Imanaka at col. 1, lines 15-24 and col. 2, lines 36-49. In particular, there is no suggestion that the power sources provide electrical energy, independently or otherwise, to the primary brake EB or secondary brake BC.

Accordingly, withdrawal of the rejection of claim 13 as unpatentable over Frait and Imanaka is respectfully requested.

Claims 9 and 10 were rejected under 35 USC 103(a) as unpatentable over Frait et al. in view of Imanaka, and further in view of JP 5-158742.

Claims 9 and 10 depend upon claim 1. JP 5-158742 does not independently suggest the features of claim 1, nor remedy the deficiencies of Frait and Imanaka with respect to claim 1. Accordingly, claims 9 and 10 are allowable over the cited combination for at least the reasons discussed in connection with claim 1, and therefore withdrawal of the rejection of claims 9 and 10 is respectfully requested.

Claim 23 was rejected under 35 USC 103(a) as being unpatentable over Frait in view of Maron, and further in view of JP 5-158742. Along lines discussed above, because claim 23 depends on claim 1, claim 23 is allowable over the cited combination for at least the reasons discussed in connection with claim 1, and therefore withdrawal of the rejection of claim 23 is respectfully requested.

Claims 16 and 17 were rejected under 35 USC 103(a) as being unpatentable over Frait in view of Maron and Imanaka.

Claim 17 is dependent upon claim 1, and consequently allowable over the combination of Frait, Maron and Imanaka for at least the reasons discussed in connection with claim 1. Accordingly, withdrawal of the rejection of claim 17 is respectfully requested.

Original claim 16 has been re-drafted in independent form as set forth above. Claim 16 includes the features of an electric power source which supplies electric energy to a brake, and a plurality of electric power sources which are arranged to supply electric energies to a front brake control device independently of each other.

As discussed above in connection with claim 13, the combination of Frait and Imanaka do not suggest the above-noted features recited in claim 16. Also, Maron neither independently suggests these features, nor remedies the deficiencies of Frait and Imanaka. Accordingly, claim 16 is allowable over the cited combination for at least the reasons discussed above in connection with claim 13. Accordingly, withdrawal of the rejection of claim 16 is respectfully requested.

Original claim 24 has been re-drafted in independent form as set forth above. It does not appear that claim 24 was rejected in the Office Action based on explicitly specified references, but the third paragraph on page 7 of the Office Action refers to claim 24. Accordingly, for purposes of responsiveness, it is assumed that claim 24 was rejected based on the proposed modification of Frait as set forth in the third paragraph on page 7 of the Office Action.

Claim 24 recites, among other features, an electric circuit in which the actuator and the brake control apparatus are connected to the electric power source device such that the actuator and the brake control apparatus are connected in parallel with each other.

Frait does not suggest such a feature. Further, to support a *prima facie* case of obviousness under § 103, when modifying the prior art to arrive at claimed invention, the prior art must suggest the desirability of the proposed modification. However, there is no discussion of the desirability for "redundancy" in Frait, nor in the other cited references. Accordingly, the proposed modification does not support a *prima facie* case of obviousness.

In view of the foregoing, withdrawal of the rejection of claim 24 over Frait as modified by the Examiner is respectfully requested.

New claims 30-32 set forth above depend either upon claim 1 or claim 5, which, as demonstrated in the above discussion, are allowable over the art of record. Accordingly, favorable consideration of new claims 30-32 is respectfully requested.

Claims 15 and 20 have been re-drafted in independent form as set forth above, and thus, as indicated by the Examiner in item 16 of the above-identified Office Action, are allowable.

In light of the above discussion, Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4323 to discuss any matter concerning this application. The Office is authorized to charge any fees under 37 C.F.R. 1.16 or 1.17 related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

Dated: 9/19/01

By: _____
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VERSION OF AMENDMENTS MARKED UP TO SHOW CHANGES MADE

In the Specification:

Please amend the Specification as follows:

The paragraph bridging pages 59 to 60:

When the brake pedal 38 is placed at its non-operated position, each of the two pins 241, 242 is located at a downstream one of the opposite ends of the corresponding arcuate groove 245, 246, as seen in the rotating direction of the proximal portion 232 of the brake pedal 38. When the brake pedal 38 is depressed, the proximal portion 232 is rotated relative to the pins 241, 242 such that the pins 241, 242 are moved within the respective grooves 245, 256 toward the upstream end of each groove. As the pins 241, 242 are moved within the grooves 245, 246 during an initial period of the pivotal movement of the brake pedal 38, the elastic member 248 is elastically deformed permitting an increase in the operating stroke of the brake pedal 38, but substantially no twisting of the brake pedal 38, but substantially no twisting of the torsion bar [346] 236 takes place during this initial period. After the pins 240, 241 have been brought into abutting contact with the upstream ends of the arcuate grooves 245, 246, the torsion bar 236 is twisted as the brake pedal 38 is further depressed. Thus, the operating stroke of the brake pedal 38 increases as the operating force increases. The stroke simulator 230 gives different operating characteristics of the brake pedal 38 during the initial and subsequent periods of operation or pivotal rotation of the brake pedal 38, thus simulating the operating stroke of the brake pedal 38 which would be obtained if the operating force were directly used to activate the brakes 10, 12, 14, 16, 33, 34.

Page 63, first full paragraph:

The present braking system uses a main control device 300 which includes three CPUs 302, 304, 306, three EEPROMs 308 corresponding to the CPUs 302, 304, 306, and three A/D converters 309 corresponding to the CPUs [303] 302, 304, 306. As shown in Fig. 9, three batteries 312, 314, 316 are connected to the respective three CPUs 302, 304, [307] 306. An alternator 317 is connected to the three batteries 312, 314, 316, for storing electric energies therein. Each of the batteries 312 and 314 is adapted to store the electric energies of 12V and 36V, while the battery 316 is adapted to store the electric energy of 12V. Each of the batteries 312, 314 has two terminals used to supply the electric energies of 12V and 36V, respectively. The batteries 312, 314, 316 cooperate to serve as an electric power source device.

The paragraph bridging pages 63 to 64:

In an electric circuit 318 including the battery 312, this battery 312 is connected to a first group of control devices consisting of the first CPU 302 and the motor control device 44 and driver circuit 54 for the front left wheel FL, and to the electric motor 22 for the front left wheel FL. In an electric circuit 320 including the battery 314, this battery 314 is connected to a second group of control devices consisting of the second CPU 304 and the electric motor 46 and driver circuit 56 for the front right wheel FR, and to the electric motor 24 for the front right wheel FR. In an electric circuit 322 including the battery 316, this battery 316 is connected to a third group of control devices consisting of the third CPU [304] 306, the motor control devices 48, 50 and driver circuits 58, 60 for the rear left and right wheels RL, RR and the motor control device 52 and driver circuit 62 for the parking brakes 33, 34, and to a group of electric motors consisting of the electric motors 30, 32 for the rear left and right wheels FL, FR and the electric motor 36

for the parking brake 36. The electric energies of the batteries 312, 314, 316 are supplied to the respective first, second and third CPUs 302, 304, 406, independently of each other, so that even in the event of abnormality of one or two of [the] the batteries 312, 314, 316, the CPU or CPUs corresponding to the normal one or ones of the three batteries can be normally operated, permitting the normal operation of the brakes 10, 12, 14, 16, 33, 34.

In the claims:

Kindly amend the claims as follows:

1. (Amended) An electrically controlled braking system including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for controlling an electric energy to be supplied from an electric power source device to said brake, for thereby controlling an operation of said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device, and at least one of said braking control apparatus and said brake,

wherein said switching device includes a first switch and a second switch which are connected in parallel with each other, said first switch comprising at least one of one of an ignition switch of the automotive vehicle, and a second switch which is turned on and off in response to an operation of said ignition switch, said second switch being turned on and off in response to an operation of said brake operating member, said switching device being turned on for connecting said electric power source device to at

least one of said brake control apparatus and said brake, in response to either one of the operations [an operation] of said ignition switch and said brake operating member.

2. (Amended) An electrically controlled braking system according to claim 1, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electric motor for forcing said friction member onto said rotor, and said brake control apparatus includes a motor control device for controlling the electric energy to be supplied from said electric power source device to said electric motor.

3. (Amended) An electrically controlled braking system according to claim 1, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electrically operated actuator for forcing said friction member on to said rotor, said switching device is disposed between said electric power source device and said actuator.

4. (Amended) An electrically controlled braking system according to claim 1, wherein said electrically controlled brakes includes a rotor for rotating with said wheel, a friction member, and an electrically operated actuator for forcing said friction member onto said rotor, said braking system further comprising another switching device disposed between said electric power source device and said actuator, said another switching device being turned on to connect said electric power source device to said actuator in response to an operation of said brake operating member.

5. (Amended) An electrically controlled braking system including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for

controlling an electric energy to be supplied from said electric power source device to said brake, for thereby controlling an operation of said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device and said brake control apparatus, said switching device being turned on for connecting said electric power source device to said brake control apparatus, in response to an operation of said brake operating member [according to claim 1], wherein said switching device includes a plurality of switches connected in series with each other.

8. (Amended) An electrically controlled braking system according to claim 6, wherein said brake control apparatus [(18)] includes a control on/off device for continuing a control of the electrically controlled braking system when [predetermined] at least one predetermined control device of said plurality of control devices is normal, and stopping the control of said electrically controlled braking system when said [predetermined] at least one predetermined control device [of said plurality control devices] is not normal.

13. (Amended) An electrically controlled braking system including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for controlling an electric energy to be supplied from said electric power source device to said brake, for thereby controlling an operation of said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device and said brake control apparatus, said switching device being turned on for connecting said

electric power source device to said brake control apparatus, in response to an operation of said brake operating member [according to claim 1], wherein said electrically controlled brake includes a front brake for braking a front wheel and a rear brake for braking a rear wheel, and said brake control apparatus includes a front brake control device for controlling an operation of said front brake and a rear brake control device for controlling said rear brake, said electric power source device includes a plurality of electric power sources which are arranged to supply electric energies to said front brake control device independently of each other.

15. (Amended) An electrically controlled braking system including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for controlling an electric energy to be supplied from said electric power source device tto said brake, for thereby controlling an operation of said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device and said brake control apparatus, said switching device being turned on for connecting said electric power source device to said brake control apparatus, in response to an operation of said brake operating member [according to claim 1], wherein said electrically controlled brake includes a front left brake for braking a front left wheel, a front right brake for braking a front right wheel, a rear left brake for braking a rear left wheel and a rear right brake for braking a rear right brake, and said brake control apparatus includes a front left brake control device for controlling said front left brake, a front right brake control device for controlling said front right brake, a rear left brake control device for

controlling said rear left brake and a rear right brake control device for controlling said rear right brake, said electric power source device including a front left brake power source and a front right brake power source which are arranged to supply electric energies to said front left and right brake control devices, respectively, independently of each other, and a common rear brake power source arranged to supply an electric energy to both of said rear left and right brake control devices.

16. (Amended) An electrically controlled braking system including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for controlling an electric energy to be supplied from said electric power source device to said brake, for thereby controlling an operation of said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device and said brake control apparatus, said switching device being turned on for connecting said electric power source device to said brake control apparatus, in response to an operation of said brake operating member [according to claim 1], wherein said electrically controlled brake includes front rotor rotating with a front wheel, a front friction member, and an electrically operated front brake actuator for forcing said front friction member onto said front rotor [said friction member], and said electric power source device includes a plurality of electric power sources arranged to supply electric energies to said front brake actuator independently of each other.

17. (Amended) An electrically controlled braking system according to claim 16, wherein said electrically controlled brake further includes two electrically

operated rear brake actuators each of which is arranged to force a rear friction member onto a rear rotor rotating with a corresponding one of rear left and right wheels, and said electric power source device includes two electric power sources provided for said two rear brake actuators, respectively.

18. (Amended) An electrically controlled braking system according to claim 1, wherein said electrically controlled brake includes an electrically operated front brake actuator for forcing a friction member onto a rotor rotating with a front wheel and an electrically operated rear brake actuator for forcing a friction member onto a rotor rotating with a rear wheel, and said electric power source device includes a front brake power source for supplying an electric energy to said electrically operated front brake actuator and a rear brake power source for supplying an electric energy to said electrically operated rear brake actuator.

19. (Amended) An electrically controlled braking system according to claim 1, wherein said electrically controlled brake includes a plurality of brakes for braking respective wheels of the automotive vehicle, said brakes including respective electrically operated electric motors each of which is arranged to force a friction member onto a rotor for rotating with a corresponding one of the wheels, said braking system further comprising a plurality of actuator switching device each of which is disposed between said electric power source device and a corresponding one of said electric motors, each of said actuator switching devices being operable between a connecting state for connecting said electric power source device to the corresponding electric motor, and a disconnecting state for disconnecting said electric power source device from said corresponding electric motor.

20. (Amended) An electrically controlled braking system including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for controlling an electric energy to be supplied from said electric power source device to said brake, for thereby controlling an operation of said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device and said brake control apparatus, said switching device being turned on for connecting said electric power source device to said brake control apparatus, in response to an operation of said brake operating member,

wherein said electrically controlled brake includes a plurality of brakes for braking respective wheels of the automotive vehicle, said brakes including respective electrically operated electric motors each of which is arranged to force a friction member onto a rotor rotating with a corresponding one of the wheels, said braking system further comprising a plurality of actuator switching devices each of which is disposed between said electric power source device and a corresponding one of said electric motors, each of said actuator switching devices being operable between a connecting state for connecting said electric power source device to the corresponding electric motor, and a disconnecting state for disconnecting said electric power source device from said corresponding electric motor,

[according to claim 19,] and wherein said brake control apparatus includes motor control devices for controlling said electric motors, respectively, and each of said plurality of actuator switching devices includes two switches connected in series with

each other, one of said two switches of said each of said actuator switching devices being turned off when the corresponding electric motor becomes abnormal, the other of said two switches being turned off when the corresponding motor control device becomes abnormal.

21. (Amended) An electrically controlled braking system according to claim 1, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electrically operated actuator for forcing said friction member onto said rotor, and said brake control apparatus includes a main control device which determines a physical quantity relating to a desired value of a braking force to be produced by said brake and generates a control command representative of the determined physical quantity, and an actuator control device which controls said electrically operated actuator according to said control command and generates a signal representative of a physical quantity relating to an actual value of the braking force produced by said brake.

24. (Amended) An electrically controlled braking system including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for controlling an electric energy to be supplied from said electric power source device to said brake, for thereby controlling an operation of said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device and said brake control apparatus, said switching device being turned on for connecting said electric power source device to said brake control apparatus, in response to an operation

of said brake operating member [according to claim 1], wherein said electrically controlled brake includes a rotor rotating with said wheel, a friction member, and an electrically operated actuator for forcing said friction member onto a rotor rotating with said wheel said rotor, said braking system comprising an electric circuit in which said actuator and said brake control apparatus are connected to said electric power device such that said actuator and said brake control apparatus are connected in parallel with each other, and wherein said switching device is disposed in a common portion of said electric circuit which serves to connect said control apparatus.

25. (Amended) An electrically controlled braking system according to claim 24, further comprising a controller switching device which is turned off to disconnect said electrically operated actuator [brake control apparatus] from said electric power source device when said brake control apparatus is abnormal, said controller switching device being disposed in an exclusive portion of said electric circuit which serves to connect said electric power source device to only said actuator.

30. (New) An electrically controlled braking system according to claim 1, wherein said first switch consists of said switch which is turned on and off in response to the operation of said ignition switch.

31. (New) An electrically controlled braking system according to claim 1, wherein said first switch consists of said ignition switch.

32. (New) An electrically controlled braking system according to claim 5, wherein said brake control apparatus includes a main control device which determine a physical quantity relating to a desired value of a braking force to be produced by said brake, on the basis of at least one of an operation stroke of said brake operating member

and an operation force acting on said brake operating member, wherein said switching device including said plurality of switches is disposed between said electric power source and said main control device.

ABSTRACT OF THE DISCLOSURE

The disclosure relates to an electrically controlled braking system including an electrically controlled brake for braking a vehicle wheel, an electric power source device, and a brake control apparatus for controlling an electric energy to be supplied from the electric power source device to the brake, for thereby controlling an operation of the brake, when a brake operating member is operated. A switching device is disposed between the electric power source device and the brake control apparatus. The switching device is turned on for connecting the electric power source device to the brake control apparatus, in response to an operation of the brake operating member.